

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

TS Starter Set

Revision date: 05.01.2022

Product code: 1106551

Page 1 of 10

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

TS Starter Set

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

No information available.

1.3. Details of the supplier of the safety data sheet

Company name: TUNAP GmbH & Co. KG
Street: Bürgermeister-Seidl-Str. 2
Place: D-82515 Wolfratshausen
Telephone: + 49 (0) 8171/1600 - 0 Telefax: + 49 (0) 8171/1600 - 40
E-mail: sdb@tunap.com
Internet: www.tunap.com

1.4. Emergency telephone number:

1774 / +356 2559 4600

SECTION 2: Hazards identification**2.2. Label elements****2.3. Other hazards**

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Relevant ingredients**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
64742-48-9	Hydrocarbons, C9 - C11, n-alkanes, iso-alkanes, cyclics, < 2 % aromates			10 - < 20 %
	919-857-5		01-2119463258-33	
	Flam. Liq. 3, STOT SE 3, Asp. Tox. 1; H226 H336 H304 EUH066			
64741-66-8	Hydrocarbons C7-C9, iso-alkanes			5 - < 10 %
	921-728-3		01-2119471305-42	
	Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H315 H336 H304 H411			
75-28-5	isobutane			5 - < 10 %
	200-857-2	601-004-00-0	01-2119485395-27	
	Flam. Gas 1, Liquefied gas; H220 H280			
74-98-6	propane			0.1 - < 1 %
	200-827-9	601-003-00-5	01-2119486944-21	
	Flam. Gas 1, Liquefied gas; H220 H280			
106-97-8	butane			0.1 - < 1 %
	203-448-7	601-004-00-0	01-2119474691-32	
	Flam. Gas 1, Liquefied gas; H220 H280			

Full text of H and EUH statements: see section 16.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

TS Starter Set

Revision date: 05.01.2022

Product code: 1106551

Page 2 of 10

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
64742-48-9	919-857-5	Hydrocarbons, C9 - C11, n-alkanes, iso-alkanes, cyclics, < 2 % aromates	10 - < 20 %
		inhalation: LC50 = 4951 mg/l (vapours); dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg	
64741-66-8	921-728-3	Hydrocarbons C7-C9, iso-alkanes	5 - < 10 %
		inhalation: LC50 = > 21 mg/l (vapours); inhalation: LC50 = > 9,4 mg/l (dusts or mists); dermal: LD50 = > 2200 - 2500 mg/kg; oral: LD50 = > 7100 - 7800 mg/kg	

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

First aider: Pay attention to self-protection! Remove persons to safety. Never give anything by mouth to an unconscious person or a person with cramps.

After inhalation

Remove person to fresh air and keep comfortable for breathing.

After contact with skin

Take off immediately all contaminated clothing and wash it before reuse.

After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Do NOT induce vomiting. Observe risk of aspiration if vomiting occurs. Call a physician in any case!

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Call a POISON CENTER. Symptoms can occur only after several hours.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Unsuitable extinguishing media**

Full water jet

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Move undamaged containers from immediate hazard area if it can be done safely.

Additional information

Danger of bursting container.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Wear breathing apparatus if exposed to vapours/dusts/aerosols. Remove all sources of ignition. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

For non-emergency personnel

First aider: Pay attention to self-protection!

For emergency responders

Fight fire with normal precautions from a reasonable distance.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Ensure all waste water is collected and treated via a waste water treatment plant.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

TS Starter Set

Revision date: 05.01.2022

Product code: 1106551

Page 3 of 10

6.3. Methods and material for containment and cleaning up**For containment**

Prevent spread over a wide area (e.g. by containment or oil barriers).

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Observe instructions for use.

Dust must be exhausted directly at the point of origin. Vapours/aerosols must be exhausted directly at the point of origin. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

When using do not eat, drink, smoke, sniff.

Wear personal protection equipment (refer to section 8).

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Heating causes rise in pressure with risk of bursting.

Advice on general occupational hygiene

Avoid exposure. Wear suitable protective clothing. Draw up and observe skin protection programme.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed.

Hints on joint storage

Do not store together with: Pyrophoric or self-heating substances. Food and feedingstuffs.

Further information on storage conditions

Protect from direct sunlight. Store in a cool dry place.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

TS Starter Set

Revision date: 05.01.2022

Product code: 1106551

Page 4 of 10

DNEL/DMEL values

CAS No	Name of agent	Exposure route	Effect	Value
64742-48-9	Hydrocarbons, C9 - C11, n-alkanes, iso-alkanes, cyclics, < 2 % aromates			
Worker DNEL, long-term	inhalation	systemic	1500 mg/m ³	
Worker DNEL, long-term	dermal	systemic	300 mg/kg bw/day	
Consumer DNEL, long-term	inhalation	systemic	900 mg/m ³	
Consumer DNEL, long-term	dermal	systemic	300 mg/kg bw/day	
Consumer DNEL, long-term	oral	systemic	300 mg/kg bw/day	
64741-66-8	Hydrocarbons C7-C9, iso-alkanes			
Worker DNEL, long-term	inhalation	systemic	2035 mg/m ³	
Worker DNEL, long-term	dermal	systemic	773 mg/kg bw/day	
Consumer DNEL, long-term	inhalation	systemic	608 mg/m ³	
Consumer DNEL, long-term	dermal	systemic	699 mg/kg bw/day	
Consumer DNEL, long-term	oral	systemic	699 mg/kg bw/day	

Additional advice on limit values

- a no restriction
- b End of exposure or end of shift
- c at long-term exposure:
- d before next shift

blood (B)

Urine (U)

8.2. Exposure controls**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Suitable eye protection:

EN 166

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Suitable material: NBR (Nitrile rubber) Breakthrough time: 480min

Thickness of the glove material 0,45 mm

EN ISO 374

Skin protection

Wear suitable protective clothing. Take off immediately all contaminated clothing and wash it before reuse.

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Filtering device with filter or ventilator filtering device of type:

Observe the wear time limits as specified by the manufacturer.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:

Aerosol

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

TS Starter Set

Revision date: 05.01.2022

Product code: 1106551

Page 5 of 10

Colour:

pH-Value (at 20 °C):

Density (at 20 °C):

Test method

DIN 19268

0,89 g/cm³ DIN 51757**9.2. Other information**

Relative density, Colour, Odour, Viscosity, pH.

SECTION 10: Stability and reactivity**10.1. Reactivity**

No information available.

10.3. Possibility of hazardous reactions

Do not expose to temperatures above 50 °C. Heating causes rise in pressure with risk of bursting.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. Take precautionary measures against static discharges.

10.5. Incompatible materials

Pyrophoric or self-heating substances.

Further information

Do not mix with other chemicals.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

Acute toxicity

Based on available data, the classification criteria are not met.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l; ATE (inhalation gas) > 20000 ppm

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64742-48-9	Hydrocarbons, C9 - C11, n-alkanes, iso-alkanes, cyclics, < 2 % aromates				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1988)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1989)	OECD Guideline 402
	inhalation (4 h) vapour	LC50 4951 mg/l	Rat		
64741-66-8	Hydrocarbons C7-C9, iso-alkanes				
	oral	LD50 > 7100 - 7800 mg/kg	Rat	Study report (1961)	OECD Guideline 401
	dermal	LD50 > 2200 - 2500 mg/kg	Rabbit	Study report (1961)	Standard acute method, applying 4 differ
	inhalation (4 h) vapour	LC50 > 21 mg/l	Rat	Study report (1985)	OECD Guideline 403
	inhalation (4 h) dust/mist	LC50 > 9,4 mg/l	Rat		

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

TS Starter Set

Revision date: 05.01.2022

Product code: 1106551

Page 6 of 10

Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

No indication of human carcinogenicity.

No indications of human germ cell mutagenicity exist.

No indications of human reproductive toxicity exist.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

, Inhalation, Skin contact, Eye contact.

Reference to other sections: 2.1, 4.2.

Specific effects in experiment on an animal

No information available.

11.2. Information on other hazards**Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Other information

No information available.

SECTION 12: Ecological information**12.1. Toxicity**

There are no data available on the mixture itself.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

TS Starter Set

Revision date: 05.01.2022

Product code: 1106551

Page 7 of 10

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
64742-48-9	Hydrocarbons, C9 - C11, n-alkanes, iso-alkanes, cyclics, < 2 % aromates					
	Acute fish toxicity	LC50 > 100 mg/l	96 h			
	Acute algae toxicity	ErC50 > 1000 mg/l	72 h	Pseudokirchneriella subcapitata	REACH Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50 > 100 mg/l	48 h			
64741-66-8	Hydrocarbons C7-C9, iso-alkanes					
	Acute fish toxicity	LL50 > 13,4 mg/l	96 h	Oncorhynchus mykiss	REACH Registration Dossier	OECD Guideline 203
	Acute algae toxicity	ErC50 12 mg/l	72 h	Raphidocelis subcapitata	REACH Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EL50 ca. 2,4 mg/l	48 h		Publication (1986)	other: As described in: The evaluation o
	Fish toxicity	NOEC 0,778 mg/l	28 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2009)	QSAR
	Crustacea toxicity	NOEC 1 mg/l	21 d		REACH Registration Dossier	OECD Guideline 211

12.2. Persistence and degradability

There are no data available on the mixture itself. 0

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
64742-48-9	Hydrocarbons, C9 - C11, n-alkanes, iso-alkanes, cyclics, < 2 % aromates			
	OECD Guideline 301 F	80%	28	ECHA
	leicht biologisch abbaubar			

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
64742-48-9	Hydrocarbons, C9 - C11, n-alkanes, iso-alkanes, cyclics, < 2 % aromates	5
64741-66-8	Hydrocarbons C7-C9, iso-alkanes	4,5
75-28-5	isobutane	2,8
74-98-6	propane	2,36
106-97-8	butane	2,89

BCF

CAS No	Chemical name	BCF	Species	Source
64742-48-9	Hydrocarbons, C9 - C11, n-alkanes, iso-alkanes, cyclics, < 2 % aromates	144,3	calculated	Other company data (
64741-66-8	Hydrocarbons C7-C9, iso-alkanes	198,7	Mytilus edulis	REACH Registration D

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

TS Starter Set

Revision date: 05.01.2022

Product code: 1106551

Page 8 of 10

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - used product

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.1
Classification code:	5F
Special Provisions:	190 327 344 625
Limited quantity:	1 L
Excepted quantity:	E0
Transport category:	2
Tunnel restriction code:	D

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.1
Classification code:	5F
Special Provisions:	190 327 344 625
Limited quantity:	1 L

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

TS Starter Set

Revision date: 05.01.2022

Product code: 1106551

Page 9 of 10

Excepted quantity: E0

Marine transport (IMDG)**14.1. UN number or ID number:** UN 1950**14.2. UN proper shipping name:** AEROSOLS**14.3. Transport hazard class(es):** 2.1**14.4. Packing group:** -

Hazard label: 2.1

Special Provisions: 63, 190, 277, 327, 344, 381,959

Limited quantity: 1000 mL

Excepted quantity: E0

EmS: F-D, S-U

Air transport (ICAO-TI/IATA-DGR)**14.1. UN number or ID number:** UN 1950**14.2. UN proper shipping name:** AEROSOLS, flammable**14.3. Transport hazard class(es):** 2.1**14.4. Packing group:** -

Hazard label: 2.1

Special Provisions: A145 A167 A802

Limited quantity Passenger: 30 kg G

Passenger LQ: Y203

Excepted quantity: E0

IATA-packing instructions - Passenger: 203

IATA-max. quantity - Passenger: 75 kg

IATA-packing instructions - Cargo: 203

IATA-max. quantity - Cargo: 150 kg

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 28, Entry 40, Entry 75

Directive 2010/75/EU on industrial emissions: No information available.

Directive 2004/42/EC on VOC in paints and varnishes: No information available.

Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Aerosol Directive (75/324/EEC)

National regulatory information

Water hazard class (D):

SECTION 16: Other information

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

TS Starter Set

Revision date: 05.01.2022

Product code: 1106551

Page 10 of 10

Abbreviations and acronyms

Flam. Gas: Flammable gases
Liquefied gas
Flam. Liq: Flammable liquid
Asp. Tox: Aspiration hazard
Skin Irrit: Skin irritation
STOT SE: Specific target organ toxicity - single exposure
Aquatic Chronic: Chronic aquatic hazard
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA: International Air Transport Association
IMDG: International Maritime Code for Dangerous Goods
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL/DMEL: Derived No Effect Level / Derived Minimal Effect Level
WEL (UK): Workplace Exposure Limits
TWA (EC): Time-Weighted Average
ATE: Acute Toxicity Estimate
STEL (EC) Short Term Exposure Limit
LC50: Lethal Concentration
half maximal Effective Concentration
ErC50: means EC50 in terms of reduction of growth rate

Relevant H and EUH statements (number and full text)

H220	Extremely flammable gas.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)